352 And the life of these Indians is as simple and primitive as
442 their houses. They have no furniture of any kind, they squat and
513 sleep on the floor. As for tools, the only ones they have are cook-
ing utensils and what they need for their canoe trips and for hunt-
622 ing and fishing. Each district has its Gobernador or cacique, who
rules with an iron hand and keeps order. Around Easter they have
776 a few penalty and penance days, when the chieftain executes
sentences of whipping on all those who have committed misdeeds
656 in the course of the year. The government in Quito does not
interfere at all with the Cayapa, as they know that these peaceful
Indians never get into trouble and never present problems.

584 The love and marriage life of the Cayapa is on a morally very
585 high level. If a young man falls in love with a girl, his father
turns match-maker and goes to see the girl's parents. If the
young man is acceptable, they demand as high a dowry as possible,
consisting of canoes, domestic animals, utensils and food. They
will not part with their daughter without receiving a good price
for her. In other words, the procedure is exactly the reverse from
what it is in Europe, where the young lady has to be outfitted
with a dowry in order to find a man.

582 In order to find out now whether the enamored young Cayapa
583 is actually of marriageable age and in a position to support a
[911] family, he is sent into the forest with a blowgun, bow and arrows,
i. e. with weapons which he can manufacture himself, in order to
kill a Sahino (type of wild boar). If he succeeds in this hunting
feat, he has proved his capability, and the wedding may take
place. Beforehand, however, he is sent to see the cacique, who
will explain to him that marriage not only brings pleasures, but
also troubles, asking him, whether he is prepared to suffer these.
It is obvious that the answer is always yes. And now he has to
undergo the test. He has to bare his back, on which the cacique
will administer a hundred blows (well-counted on fingers and toes)
with the whip. If the fiancé has neither cried out nor dodged, but
bore the whipping with courage and steadfastness, even though his
teeth may have been clenched, he has successfully passed the
test [286] and the ceremony may be completed by the cacique.

585 A banquet is organized. Whatever the fields, forest and rivers
[878] can yield in terms of potables will be turned into food which will
be accompanied by great quantities of Chicha, Guarapo and Masato
(corn, cane-sugar and banana beverages). All the village inhabit-
[915] ants will attend the festivities. Many of them show how practical

2: Murra E-4 (no date) 1943 SD6 Cayapa SD6

as that of the plantain. Almost every family owns its cane mill and distillery, which are supplied by the omnipresent canefields.

With all this emphasis on agriculture, the *Cayapa* are, nevertheless, a jungle people, skilled hunters of many species of rodents, deer, felines, peccaries, armadillos, and birds. Life at the riverside encourages and is encouraged by dependence on fish, crustaceans, shellfish, and crocodile eggs. Under aboriginal conditions the *Cayapa* were probably never hungry.

Hogs and chickens are now kept everywhere. Dogs are not conspicuously reported.

Food is mostly boiled, though frequently meat will be broiled or baked. Surpluses are dried and smoked.

HOUSES AND VILLAGES

Though maps traditionally locate *Cayapa* "villages," these are nothing but agglomerations of three or four houses and a church. The houses stand empty most of the year and are used only at holidays when the priests visit the *Cayapa*.

The actual habitations of the people are spread through the jungle, always at riversides (pl. 57, *top*) and usually isolated from one another by fields or even uncleared stretches. The houses stand on high poles 6 to 12 feet off the ground and are reached by removable ladders. The roof is thatched with palm leaves (pl. 57, *center*), and the rectangular house is virtually unenclosed. Sometimes the house floor is separated into two parts, one for cooking, the other for sleeping and eating. One chief had a large house (pl. 57, *bottom*) which could seat 40 people and which had more than two "rooms." The furniture is scanty: hammocks are used for sitting and sleeping, and wooden seats are sometimes found. An attempt by Barrett to correlate these seats with the famous stone seats of Manabi (Handbook, vol. 2, p. 780) seems very inconclusive.

In addition to permanent houses, small temporary ranchos are sometimes built when people are far from home. The houses in the "village" are standard structures, but the church follows Spanish ways: it rests on the ground and has walls.

CLOTHING AND ADORNMENT

Although *Cayapa* tradition records a period when the people wore blankets and even ponchos, today their clothes are scanty (pl. 59, *bottom*). The men wear a tight, small, white garment, made like bathing trunks, and a thin gaudy shirt of calico, with short and very tight sleeves. On festive occasions vests of European cut and manufacture are frequently donned over the shirt, and so are felt fedoras.

Women wear a long skirt of native cloth, girded with a narrow fringed belt. As in the Highlands, several skirts of different weights are sometimes worn. Head, shoulders, and chest are usually left bare.

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

342 from four inches to a foot above the level of the main floor, and are most frequently used as sleeping platforms or as storage places for various articles.

352 In this region where the rainfall is so great and where the sun rarely shines, one of the serious problems is that of keeping clothing and other articles dry. To accomplish this, there is constructed at one side, usually at the rear of the house, or behind that portion in which the fire-box is situated, a drying platform, constructed of large bamboo stems laid side by side, without a roof, and ordinarily on or nearly on a level with the main floor. The convex surface of the bamboo permits the water falling upon it to drain readily to the ground, while the impenetrable outer surface of the bamboo permits no rain to be absorbed by it. Thus, in a few minutes after a rain, this raised platform is usually dry enough to permit the spreading upon it of clothing, or [227] of mats for the drying of cacao. At one side of this drying platform is placed a horizontal bamboo pole, usually as long as the platform and raised six or seven feet above it, for use in drying large fish-nets.

[251] On the rafters of the house, and hence high up in the interior, is constructed a platform, or loft (pl. XIV), usually of bamboo, which is used for the storage of old utensils, food, and articles not in daily use. Ordinarily this storage loft does not cover a space equal to more than one-quarter that of the floor of the house itself, and frequently it is much smaller, although always of sufficient capacity to accommodate all the surplus stores of the family.

3: Barrett E-5 (1908-1909)1925
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In pl. XI is shown the ground-plan of one of the largest of the Cayapa houses. This is the largest of the four dwellings of the chief of the Punta Venado division, and is commonly called "*la casa grande del Gobernador*." This structure is situated on the southwestern bank of the Rio Cayapas, at a point just up-stream from the confluence of the Herradura Grande. The house is occupied usually by at least two families, and can comfortably accomodate as many as forty people if necessary. The structural details of this dwelling are typical of those of Cayapa houses in general, although the others are somewhat smaller. This "casa grande" is 87 feet in extreme length by 41 feet in extreme width. The floor may be divided into two areas by the line *h-i*, which represents that along which the two inner gables meet and where the pambil eaves-trough is placed to prevent the water from running in on the floor. The larger floor area (*a*) is the general living and sleeping room, and is 50 by 35 feet, exclusive of the raised projections (*e*), which extend from six to seven feet in each case. This entire floor area is covered by a single large roof. The smaller area (*b*), about 30 feet square, is, as before stated, at the same level as the larger area, but it is covered by a separate roof, and it is here that the fire-box is situated and where all food is prepared and cooked. The fire-box (*c*) is 6 feet 4 inches by 3 feet 9 inches, and is raised about three feet from the floor. The projection (*d*), about 5 feet 6 inches wide and 19 feet 6 inches long, is at the same level as the main floor, but is made of bamboo. Here

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

are kept the water calabashes, and the preparation of food is usually done on or near this space. All houses are provided with a similar place for the storage of the calabashes, although in most cases the space devoted to this purpose is much smaller. Unlike *d*, the several projections marked *e* on the plan are raised from four to twelve inches above the level of the floor. They are from 6 to 7 feet in width, and beginning at the lower left-hand corner of the plan, measure 12½, 8½, 15, 13, 11, and 9 feet, respectively, in length. These serve as storage places and are frequently used at night as places upon which to sleep. The inner edge of each of the areas *d* and *e* is, of course, supported upon the stringers of the main floor, but the outer edge in each case is held by two special posts which rest upon the ground and reach to the roof, which naturally must project beyond the main roof in order to cover the corresponding floor projection. These posts are indicated in the ground-plan by small rectangles, and are usually somewhat smaller than those employed to support the main floor. As shown on the plan, fourteen posts are used to support the main floor, the successive posts along each side being placed from eleven to twelve feet apart. The dimensions of these posts in cross-section are usually about six by nine inches. Access to this house is by means of two ladders (*g*), both of the type shown in fig. 1, *a*. In the case of one of them a special projection (*f*), 3 feet 3 inches by 5 feet 6 inches, has been built as a landing at the top of the ladder.

In pl. XIII is shown an elevation of the same house.

3: Barrett E-5 (1908-1909)1925
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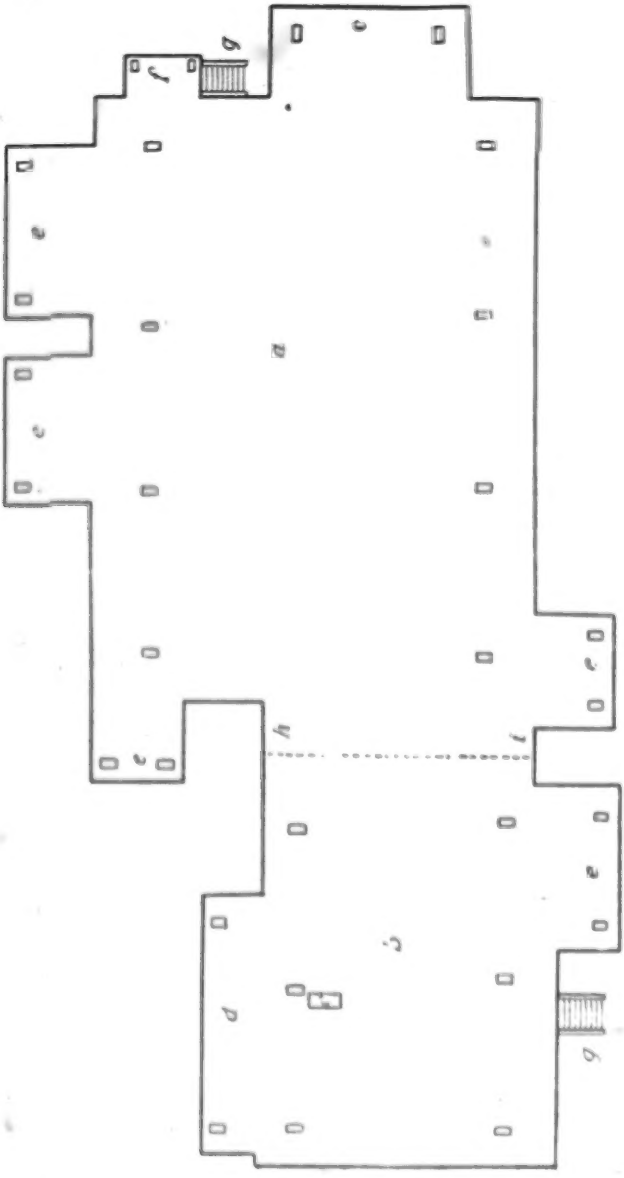
PL. XI



GROUND PLAN OF CHIEF'S HOUSE

BARRETT - CAYAPA INDIANS

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[p. 56 (A)]

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

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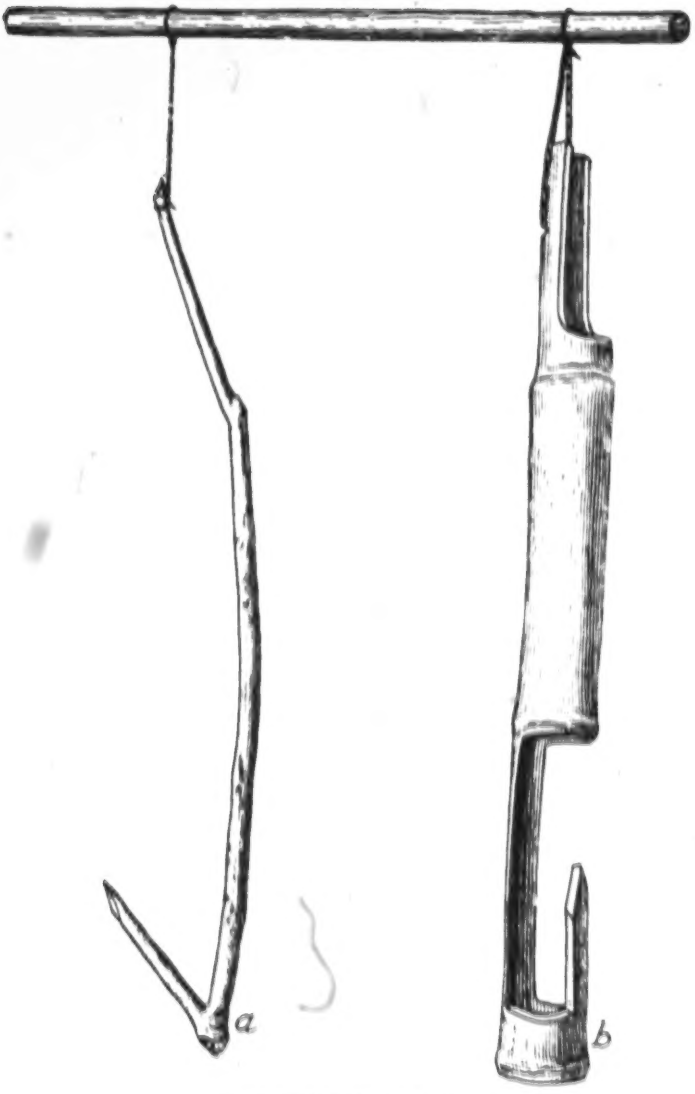

SUSPENSION HOOKS

[p. 56 (B)]

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

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STORAGE PLATFORM OR LOFT

[P. 58 (8)]

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

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DRYING PLATFORM

[p. 1268]

3: Barrett E-5 (1908-1909)1925
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minutes, usually until the leaf covering is largely, if not entirely black. The covering is then removed and the tamale eaten in that form or after being mashed flat upon the mealing stone. When obtainable, a species of large black beetle (*Rhymchophorus palmarum*), called kū′perū, is used as one of the ingredients in the making of these tamales, and it is said by the Indians to be one of the most toothsome of all their foods.

The method usually employed in preparing other vegetal foods, such as yuca, sweet potatoes, etc., is by boiling in the ordinary manner. Meats and fish are generally boiled in pottery vessels without the covering of leaves above mentioned, and they may also be broiled or baked. Broiling is done in the ordinary manner, by simply placing the food over the fire. In baking, however, a special method is employed. After being properly prepared and cut into small pieces, the meat is wrapped in two thicknesses of the tough green leaf above mentioned. The flat package thus formed is then placed upon the coals, and hot ashes and coals are heaped upon it. Several minutes are usually needed for this baking, and sometimes it is necessary to replenish the coals or to turn the package over to insure proper cooking. This method is much employed in cooking all kinds of meats, fish, shellfish, and crabs and other Crustacea.

In this warm, humid climate, where meat keeps but a very short time, drying and smoking over the fire is much employed by the Cayapa when any considerable quantity of meat or fish is on hand. For this purpose

3: Barrett E-5 (1908-1909)1925
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special racks are built above the fire-box, where strips of meat, or, if the animals or birds are small, the entire bodies, are placed to dry and smoke. Sometimes there are as many as three of these racks, one above another, each covering the same amount of space as the fire-box itself. Considerable time is necessary for drying meat in this way, and, when once dried, it must be kept either on the racks or near the fire in order to prevent molding. For drying fish there usually is employed the upper half of a large earthenware jar, which is turned down over the fire and the fish laid across the opening upon green sticks. Being thus close to the fire, a shorter time is sufficient to dry and smoke the fish, but when thus cured they also must be kept on the racks above or elsewhere near the fire-box in order to keep them from molding. A few vegetal products, especially medicinal herbs, are dried in a similar manner, as likewise are two vegetal foods. The inner covering of the tagua or ivory nut, which, when dried and then roasted upon the coals, has an excellent flavor, is used as food to a slight extent. Green plantain is cut crosswise into thin sections and dried thoroughly in the sun, when possible, or over the fire when necessary. It is then ground to powder and mixed with water into a thin gruel, which is used as food for babies when the mother is ill or for other reasons is unable to provide a proper supply of milk.

Boiling is employed also in the preparation of certain vegetal foods in cane juice. While practically all the product of the cane-field is used in making rum, some syrup and sweets are occasionally prepared. Yuca and

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

287 imprint of the maul (fig. 6) with which it was beaten as numerous sets of short parallel lines, all at an angle of about forty-five degrees with the perpendicular. Bark cloth is never decorated in any way and is strictly utilitarian. It serves almost exclusively as a sleeping [352 513] mat, and constitutes, together with a mosquito canopy and a thin cotton sheet used as a cover, all that is considered necessary for a bed. It is used occasionally for wrapping a dismantled loom or for some other special purpose.

The beating of the cloth must be done very carefully in order not to cut or tear apart the fibers, thus making holes in the cloth which render it practically worthless. The fibers naturally criss-cross and interlace in such a manner that when the beating is carefully done the result is a cloth which, while very thin, is at the same time very firm. If for any reason, however, a hole does appear in the cloth during the process of beating, it may be mended by simply placing over it a piece of bark of sufficient size to somewhat more than cover it and beating this in. The beating mixes the fibers of the patch with those of the main fabric in such manner as to make the patch almost as firm as the cloth itself.

415 At the present time some of the most characteristic utensils of the Cayapa are made from calabashes. They 177 claim that in their former life in the mountains these utensils were of pottery and that the calabash came into use among them only after their arrival on the Rio Cayapas. It is said also that there was originally a calabash tree native to this region, but that the two

3: Barrett E-5 (1908-1909)1925
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502 pl. LXXIX, instead of down in the canoe itself. A paddler standing down in the canoe ordinarily bears his whole weight upon one foot, the other foot being placed upon the gunwale and thus serving both to steady him and to counterbalance the tendency of the canoe to list toward the side on which he is paddling. The stroke of the man's paddle is, by virtue of its length, a long, slow sweep, the blade only being immersed. On reaching the end of a stroke, the paddle is swung in an arc out from the canoe over the surface of the water and again dipped gently and without splashing. The stroke of the woman's paddle, on the other hand, is, by virtue of the shortness of its handle, a short and rather jerky stroke, and she ordinarily takes three or four such strokes and then rests for a moment before taking the next three or four. A man, even when sitting and consequently using only a short length of the handle of his paddle, takes regularly timed strokes, and his whole act of paddling is even and rhythmic.

Wooden Implements

322 Implements and various other objects of wood are made to a considerable extent by the Cayapa. These will be treated here as a class, although it will be necessary to include under this head objects devoted to many different uses.

322 352 Perhaps the most interesting of the various wooden objects used by the Cayapa are the seats or benches called tcūmbū'lya. These are of several different types, as shown in pl. LXXXIII, 2-6, 8. They are usually

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

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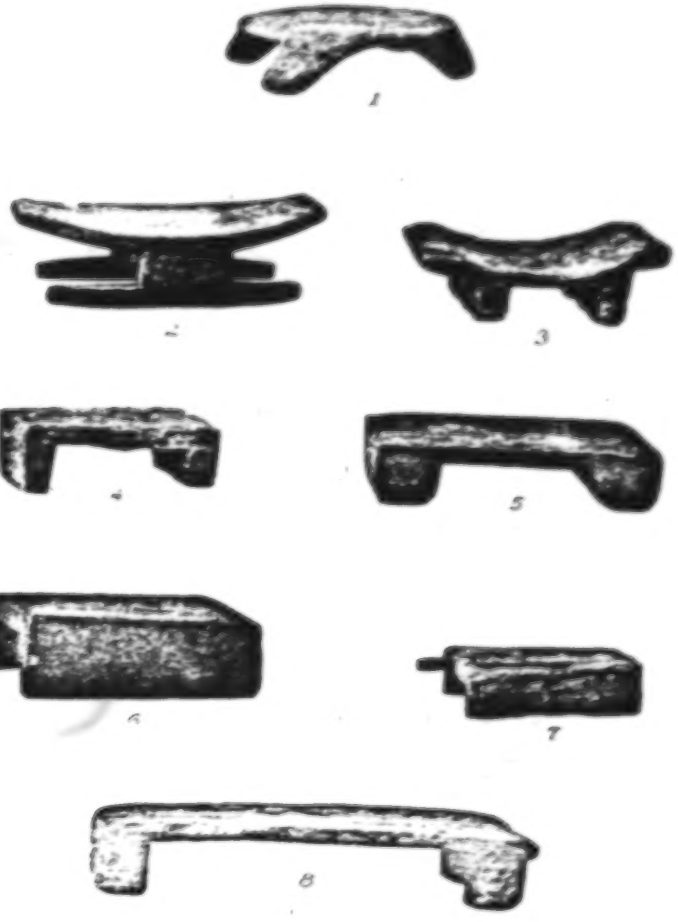

WOODEN SEATS AND BASES

[p. 154 (B)]

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

about six inches and never more than eight inches in height, are from six to nine inches in width, and from a foot to two feet in length. They are always hewn from a single block of wood and generally have two supporting surfaces. 322 352

In the most common form these supporting surfaces are narrow lines running with the grain of the wood and therefore along the long sides of the seat. This type of seat, an example of which is shown in fig. 6 of the plate, is made by simply hollowing out the under-side of the block so that the upper part of the seat proper is from an inch and a half to two inches in thickness, while the sides upon which the seat rests extend to the floor and are usually not more than from one-half to three-quarters of an inch in thickness at their bottoms.

A second form is that in which the supporting surfaces are transverse to the grain of the wood, and are made by cutting out from the middle of the under-part of the block a section of the required length. Examples of this type of seat are shown in figs. 4 and 5 of the same plate. Fig. 5, in which the under-side of the comparatively thin upper part of the seat is perfectly straight, shows the more common of the two forms.

A third form is practically the same as the last mentioned except that the thick transverse supporting surface is cut out in its middle so as to form four cylindrical posts or legs. Such a seat is shown in fig. 8 of the plate. This is an exceptionally long seat and is quite sufficient to support two people.

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

352 171 In these three types of seats the upper surface is perfectly flat, but in the two types shown in pl. LXXXIII, 2, 3, this upper surface is more or less concave. Both have forms somewhat suggestive of the large stone seats which are such a unique feature of the archeology of the province of Manabi. This is especially true of the form shown in fig. 2. Here are two long supporting surfaces which rest upon the floor and support two upright pieces which in turn support the upper curved part of the seat. If this is compared with certain of the Manabi stone seats,[13] a striking resemblance is found. Instead of the under-part being cut away, as in the case of this wooden seat, the Manabi stone seat is solid. It has, however, a broad, flat footing comparable with the two long wooden strips upon which the Cayapa seat rests. Upon this broad footing is a very much narrower supporting column on the top of which rests the concave upper part of the seat. This narrow column is carved into an animal form, so that the resemblance of this seat to that of the Cayapa wooden seat is not so great when viewed from the front as it is if seen from the rear. There is now, of course, no means of determining whether there is any connection between these two forms of seat, but the fact that these two similar types exist, the one being part of the remains of an ancient culture and the other a type of seat made and used at present by the Cayapa, is very interesting.

[13] See Saville, M. H., The Antiquities of Manabi, Ecuador, *Contributions to South American Archeology, The George G. Heye Expedition*, vol. II, pl. XXXV, figs. 1–3, New York, 1910.

3: Barrett E-5 (1908-1909)1925
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The wooden seat shown in pl. LXXXIII, 3, is in all essentials the same as that shown in fig. 2 of the same plate, except that the broad support of the two narrow strips at the bottom is not present. The bottom of this seat, like those of the seats shown in figs. 4 and 5, is made by cutting out a transverse section from the middle of the block so that the two supporting surfaces are sections which run transversely to the grain of the wood. In the seat shown in fig. 2, on the other hand, the center is cut out in the opposite direction, that is, with the grain of the wood. Neither of these types of seat with the concave surface is very commonly used.

These wooden seats are found in almost every Cayapa house, although they are not used so frequently as might be expected. Ordinarily if a man wishes to sit down he uses the hammock, which serves primarily as a baby cradle. It is so swung that its ends are not more than ten to twelve feet apart, and he is able to sit almost erect and lean back against the end. Also the raised platforms at the sides of the house serve as seats. The women and children usually sit upon the floor, although occasionally a bench may be used by one of them, especially by a woman who wishes to spin. In large measure, however, such seats are used by visitors or by the men of the house when it is necessary to sit at some particular kind of work, such as sharpening machetes, adzing and planing paddles, and the like.

A wooden device similar in form to these seats is the base upon which the whetstone used for sharpening

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

the machete is mounted (pl. LXXXIII, 7). Practically the only difference between this object and a seat such as that shown in fig. 6 of the same plate, is in the presence of the handle at one end. Both the whetstone base and the wooden seat is called tcūmbū'lya.

The whetstones, called tōla'ha, are made of a fine-grained sandstone and are purchased from the settlements down the river. A stone of almost any size is used, but one six by eight or ten inches is most usually employed. It is not fastened to the base, but simply rests upon it in order to bring the stone a few inches from the floor and to make it possible to place the hands on either side lower than the stone when necessary. With this simple apparatus and a hemispherical calabash of water to wet the stone a man will sit and sharpen machetes for a couple of hours at a time, especially when the cane-field is being cleaned or a new area in the bush is being cleared.

In fig. 1 of the plate last referred to is shown another wooden object similar in form to the seats. This is the special wooden base used as a rest upon which to set an earthenware pot as it is being coiled and shaped. Ordinarily these bases consist merely of a flat board of rectangular form. The one here shown is much more elaborate, being circular in outline and having four legs which slant outward from its perimeter; it is also hewn from a single block of wood, as are all the objects represented in this plate.

Another interesting class of wooden objects is dolls, called nawa'wa, made for the amusement of children.

3: Barrett E-5 (1908-1909)1925
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forms shown in figs. 1-2, 6, are without special name, being known by the generic term pña'ma. Those of the forms represented in figs. 5, 7, 8, are called kanda'rō.

To these earthenware vessels may be added a ninth form, though it can not strictly be considered as a separate type, since it is made by breaking off the lower portion of one of the other forms (fig. 12). It is set over the fire and serves as a kind of chimney to direct the smoke and heat upward to the fish that are laid upon sticks across its mouth for curing. There is also used, though rarely, for making chocolate, a pot with reintrant sides like that shown in fig. 9.

The clay, called tū or ñō, used in pottery-making is yellowish-brown in color and is dug from the banks of certain esteros. Usually a considerable quantity is gathered at a time and brought by canoe to the house, where it is worked over to remove stones, sticks, and other impurities. It is then wrapped in leaves and put in a shady place until needed, being moistened with water from time to time. For tempering the pottery there is mixed with the clay a bluish, gritty earth, called lu'c tū, meaning literally "blue earth or clay," which also is found in a few places along the river.

In making pottery, the woman takes a quantity of cleaned clay and again works it over to remove any remaining foreign substances, water being added if necessary to make it plastic. When the clay is of the proper consistency, the bluish, gritty earth above referred to is thoroughly kneaded into it, in quantity equaling perhaps one-tenth that of the clay. This

5: Barrett E-5 (1908-1909)1925
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tempering material is called tū ya'ndū. The mixing of a small quantity of clay is a mere matter of rolling and kneading it in the hands; but if a considerable quantity is required, as in making a large olla, it is usually mixed in a large wooden tray such as that shown in pl. LXII, 4. After thorough kneading, handfuls are torn from the side of the mass and thrown back violently on top of it. This process completed, a small lump of the clay is taken, or a very small, crude pot is made, and immediately baked in the fire-box in the house as a test. 323

To make a small plate-form utensil, one about four inches in diameter, a lump of prepared clay is rolled carefully between the hands to form a smooth sphere. The right thumb is then inserted and the ball of clay is turned about it in such manner as to make a depression in the center. Then by constantly pressing between the thumb and the fingers as the ball is rotated, the depression is gradually enlarged until finally the bottom and sides of the pot, of even thickness, are formed. If the vessel is very small, this work may all be done upon the palm of the left hand, but if it is of medium or large size, a board, ten or twelve by fifteen or eighteen inches (pl. LXXXVIII), or other flat object is used in order that the vessel may readily be turned. Occasionally the wooden base is elaborately made, as that shown in pl. LXXXIII, 1, which is circular, has four legs, and resembles in some respects the wooden benches before described. Its special use, however, is that of a rest for the larger pieces of pottery, and it is claimed by the Cayapa that it was rarely or never used as a seat. [413] 352

3: Barrett E-5 (1908-1909)1925
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work is still more apparent than in the one here referred to, because these composite, wide elements are made to pass under and over one another several times instead of only once. This process is never employed except at the starting point of this form of basket.

In detail the technics employed by the Cayapa in their basketry are as described below. Further, in addition to its use in basketry, twilling is employed in making mats and fans, and wicker is used in certain burden-bands and in fan-handles.

WICKERWORK

Wickerwork, the simplest of the two-element technics, consists of the passing of a single active or woof element over and under successive passive or warp elements. The Cayapa employ this technic almost solely in connection with the material derived from the aerial root called pitigua and for the making of five forms of basketry: a burden-basket, a shallow rectangular basket, a bottle-shape bait basket, a more or less globose basket used in carrying fruits and as a general household utensil, and a long tubular basket used especially as a receptacle for spindles. Examples of burden-baskets are shown in pl. XCII, 4, 7, while the other forms are illustrated respectively in pl. XCIII, 1, 3, 4, 12.

Ordinarily the Cayapa wickerwork is comparatively tightly woven, as is shown in illustrations referred to. There are, however, two special types of wicker basket which are open in their technic. Both are made for the purpose of allowing water to pass readily through them, being used especially as cages for live crayfish which are

3: Barrett E-5 (1908-1909)1925
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[415] 285 [352] baskets (pl. XCIII, 8), used as receptacles for spindles; mats (pl. CVI, 1, 2); fans (pl. CIV); and rings used as rests for calabashes (fig. 13). In all of these the material used is the bark of the fan-leaf palm, locally called pambil. But one type of basket has been encountered in which this technic is found in combination with another material: this is a square-bottomed, cylindrical basket similar in form to that shown in pl. XCII, 3, and is made of pitigua. A section of the side and border of this basket is shown in pl. XCIV, 6.

285 The manipulation of the elements in twilling varies considerably in Cayapa basketry. There are three fundamental methods of handling these elements, as follows: (1) A method by which one element passes over two and under two of the elements which run in the opposite direction (pl. XCIV, 3); (2) a method by which it passes in a similar manner over three and under three (pl. XCIII, 6, 10); (3) a method in which an element passes over seven and under one (pl. XCIII, 2, 5, 8, 11; and pl. XCIV, 5). [177] The last form is said to have been introduced among the Cayapa by the Indians of Colombia, and in substantiation of this it may be noted that the few Cholo who now live on the Rio Cayapas use this form of twilling extensively. The two simpler forms of twilling, so far as could be ascertained, have been long in use among the Cayapa.

In case no design is attempted, as in the basket shown in pl. XCIII, 11, or a simple design be desired, as in the baskets shown in the same plate, 6, 10, and pl. XCIV, 2, 3, these fundamental methods of handling the elements are not varied throughout the basket. If, on the other

3: Barrett E-5 (1908-1909)1925
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ends of all the elements are cut off in the same manner as was done in making the end with which the mat was begun.

Mats of this kind are most frequently used by the Cayapa in the hammocks which serve as cradles. A small mat is placed crosswise in the hammock and holds its edges apart; the baby is then laid upon this mat and swung in the hammock as a cradle. Large mats are occasionally used as beds, but for this purpose bark cloth is preferred. An important use for mats also is as a drying surface upon which to spread cacao. In canoeing, a large mat serves as a canopy or sun covering for small children or for an invalid. If its ends are placed just inside the gunwales of the canoe, bow upward, a mat forms a convenient and very serviceable canopy by virtue of its natural stiffness. An instance of such a use is shown in pl. LXXX.

SPINNING

As was mentioned in speaking of agricultural products, the Cayapa raise considerable quantities of cotton, that is to say, all the cotton needed for weaving the cloth used for their mantas and clouts and for the belts used to hold the mantas in place. No one family raises any considerable number of plants, since a single plant produces almost continuously the year round and aggregates in the course of a year a considerable quantity of bolls. These plants are grown in any convenient place near the house or on the edge of a field of cane or of a grove of chocolate trees.

3: Barrett E-5 (1908-1909)1925
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several other cords are completed, these are added to the braids at the ends. Thus by adding group after group of these braids, when the whole bundle of cords is completed and both its ends are braided it forms a skein of cords which appears like that shown in pl. CXVIII, 3. The skein is kept in this form and the individual cords are extracted from its middle. This tends to pull backward and to loosen the braids at the two ends of the bundle and thus easily to free the ends of the individual cord from the braids.

The other kind of string obtained from the bark of the tree called in Spanish cosadera and in Cayapa señgī'lya, is made in a manner similar to that employed in making pita string. The fibers used in making this string are obtained by beating out the bark by the method employed in making bark cloth. After being washed, as in the case of bark cloth also, these fibers are dried, folded, and bound into bundles (pl. CXIX, 2). When needed, the sheets are taken from the bundle and the fibers are separated and twisted into a heavy and rather loose cord which serves very well for making a hammock or as the main cable of a trot-line (pl. CXIX, 1), but otherwise is little used. The string bears the same Cayapa name as the tree itself, and its primary use is for hammocks, which are woven with the same technic as are fish-nets, shortly to be described. The meshes are, however, extremely large and are made without the aid of a mesh-stick, being kept sufficiently even by the eye alone.

The Cayapa do not splice cords by twisting together the fibers at their ends, as is done by some Indians. An individual pita cord is usually from ten to sixteen feet

3: Barrett E-5 (1908-1909)1925
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designed for their own use. In every instance these old-type designs are geometric, but the newer ones are usually realistic, depicting mammals, human beings, and other realistic objects.

In carving, the dolls are entirely realistic, as is shown in pl. LXXXIV, and depicting, the dog, alligator, bird, and especially the human form. In the last instance care is usually taken to indicate the sex. In paddle handles, on the other hand, the forms are usually simple and are always geometric, as is shown in pl. LXXVI. They have no special names. Even in the case of the elaborately carved handle shown in fig. 9 of the plate, no name was given for any of the designs. The same holds true of the designs in the face-painting sticks depicted in pl. CXXI–CXXII.

Closely related to ornamental carving are the wooden seats shown in pl. LXXXIII, some of which receive ornamental treatment certainly not demanded by utilitarian considerations. From comparison with similar objects of South and Central America it seems probable that in these seats, especially the forms shown in figs. 2 and 3, there lies a striking connection of the Cayapa culture with that of a number of other tribes in these regions. As has been shown by Professor Saville,[15] the archeological range of these objects is extensive, the most elaborate among them being the large stone seats from Manabi, carved to represent jaguars.

On the surfaces of calabash utensils are found the only incised designs in use among the Cayapa. These are

[15] See page 156, note.

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The paddle is rubbed down with abrasive leaves called /l^{y}ápis háki/. In working the blade of the paddle, a longitudinal ridge is left on both surfaces:

> Along this line the blade reaches a thickness of about three-quarters of an inch. At each side of these medial lines the blade is hollowed out very much after the fashion of a hollow-ground razor; otherwise its thickness is fairly uniform. The thickness of the blade decreases slightly toward the edge, so that the edge itself at the greatest width of the blade rarely exceeds three-sixteenths of an inch in thickness, and it may be as thin as an eighth of an inch.
>
> The handles or poles of the paddles are ordinarily from an inch to an inch and three quarters in diameter and are almost perfectly cylindrical. They taper slightly from the blade to the upper end, or what may be called the grip. In a woman's paddle this end may be truly called the grip, and it is usually notched in more or less of a fish tail form, . . . In the case of a man's paddle, however, a purely ornamental tip is put on the end, which is almost never touched in paddling (Barrett 1925:149-150).

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Benches: /cˇumbúl^{y}a/. These are small seats measuring from four to eight inches in height and from four to nine inches in width. They are always cut from one piece of wood and often have two supporting surfaces. Barrett reports eight types of which I have seen but three. Most commonly these benches are composed of three flat surfaces, less commonly the seating surface is concave. Barrett should be referred to for details of style and construction. (Barrett 1925: 154-157).

spirit is said to reside in each piece. Black stone axes are especially potent, as are pieces of crystal that have been purchased in town. Tobacco is part of every curing; the smoke wafts the illness away from the body. A considerable amount of alcohol is used as well. The witch takes a mouthful of /ǐškala/, 'rum,' and sprays it out of his mouth with a loud "whoosh" at the patient's back; a considerable amount of rum fails to compress as spray, and the witch finishes the curing in an advanced state of inebriation! In general, the manner of effecting a cure is as described by Barrett (Barrett 1925:344-352). However, I participated in one that differed considerably. I was told one day that a curing session was in progress at a point not too distant from my house. When I arrived, the cure had apparently been going on for some time. A middle-aged man lay on a reed mat that had been placed on the ground. Alejandro of Encanto sat off to one side leaning back against two parallel sticks that had been thrust into the ground to serve as a backrest. From time to time he alternately whistled short stretches of staccato sounds, that had a decided "blues" quality,

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